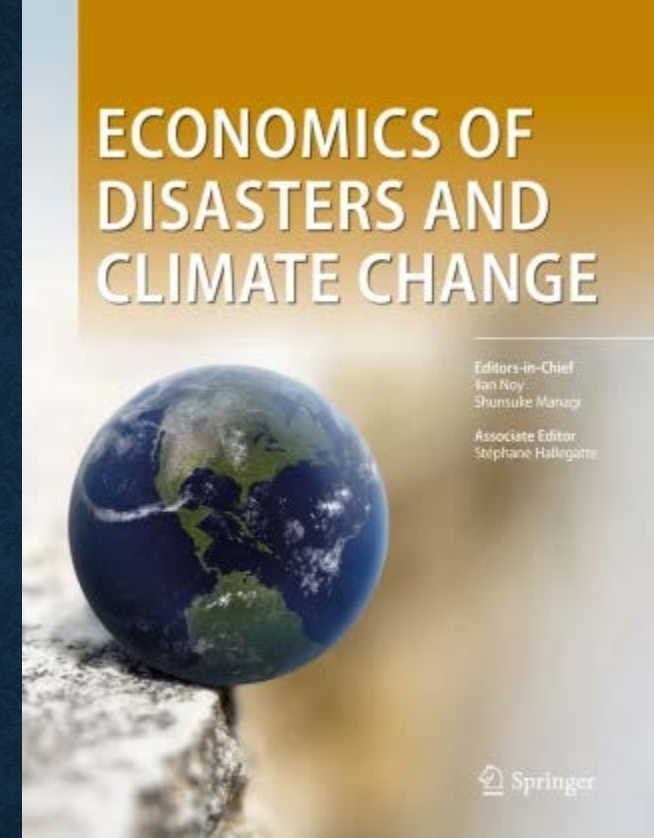


EARTH OBSERVATIONS FOR IMPACT

Shunsuke Managi

Distinguished Professor, Kyushu University

Director of UN Inclusive Wealth Report



KYUSHU
UNIVERSITY





“Money doesn't matter”

-Rich People



“Looks doesn't matter”

-Attractive People

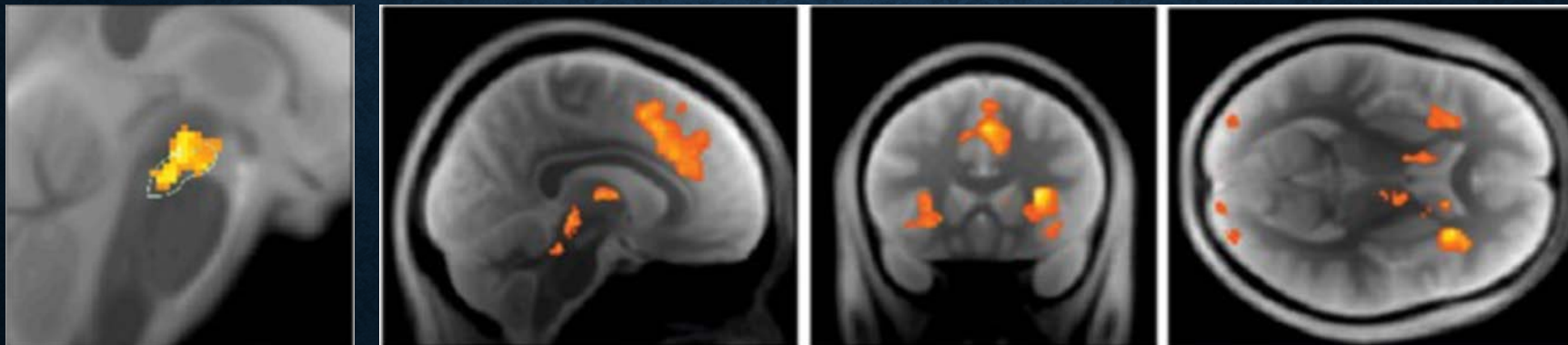
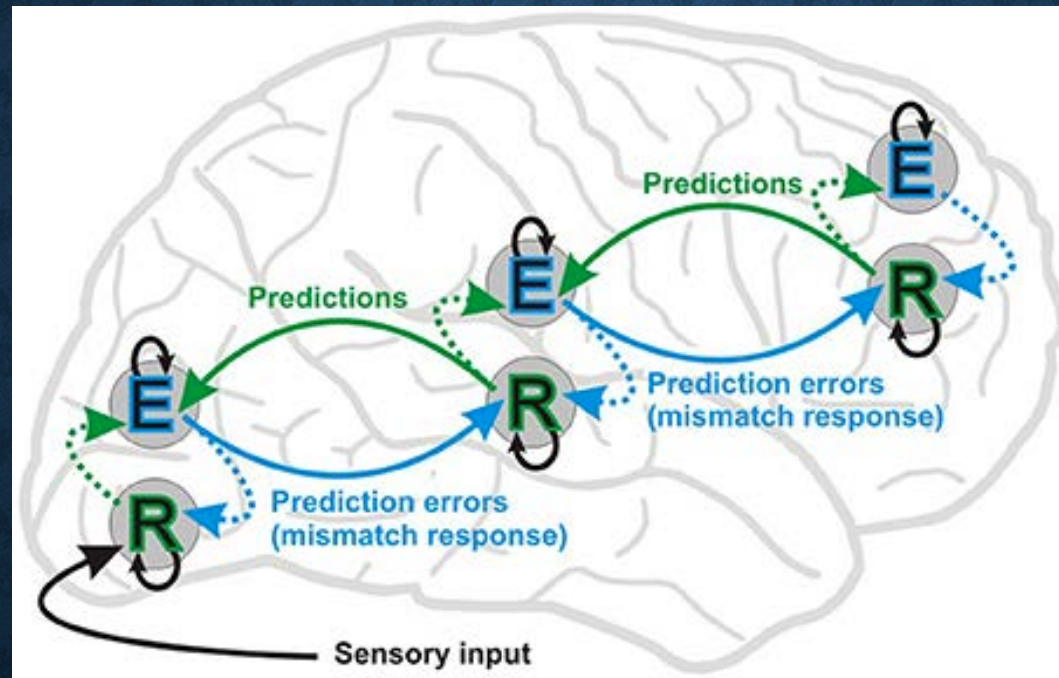


“Nothing really matters”

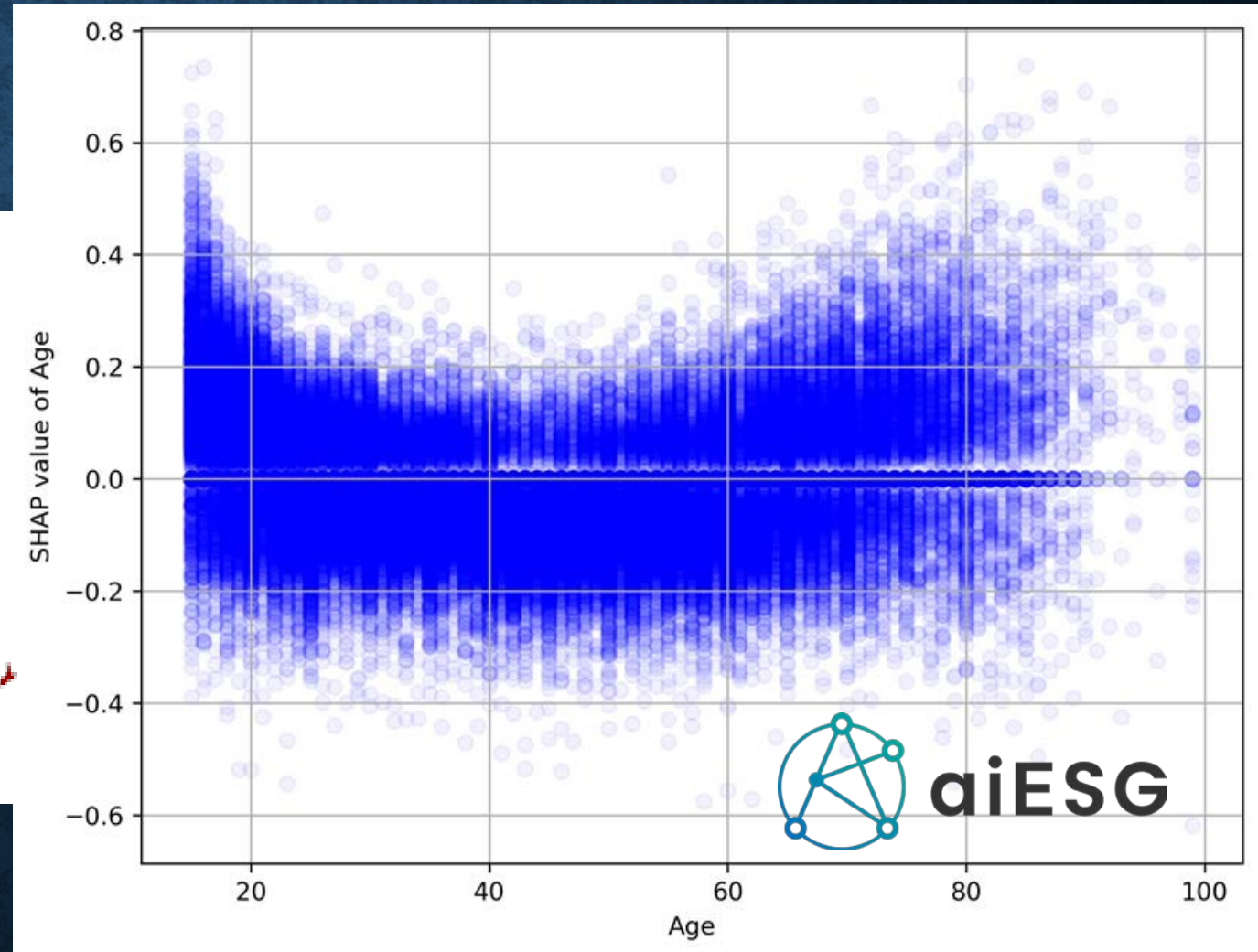
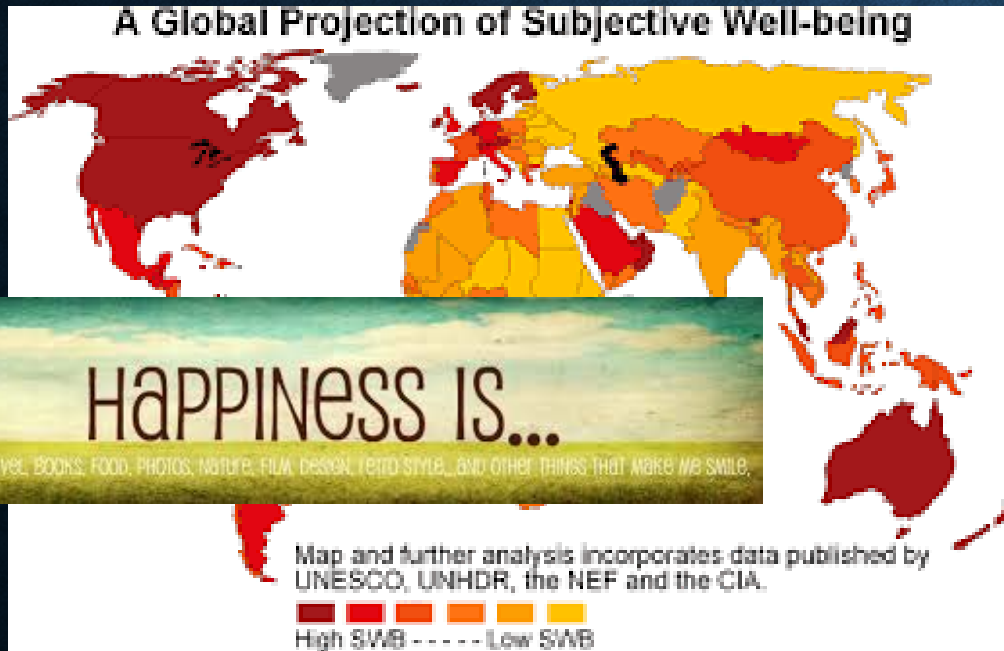
- Fucking Legend



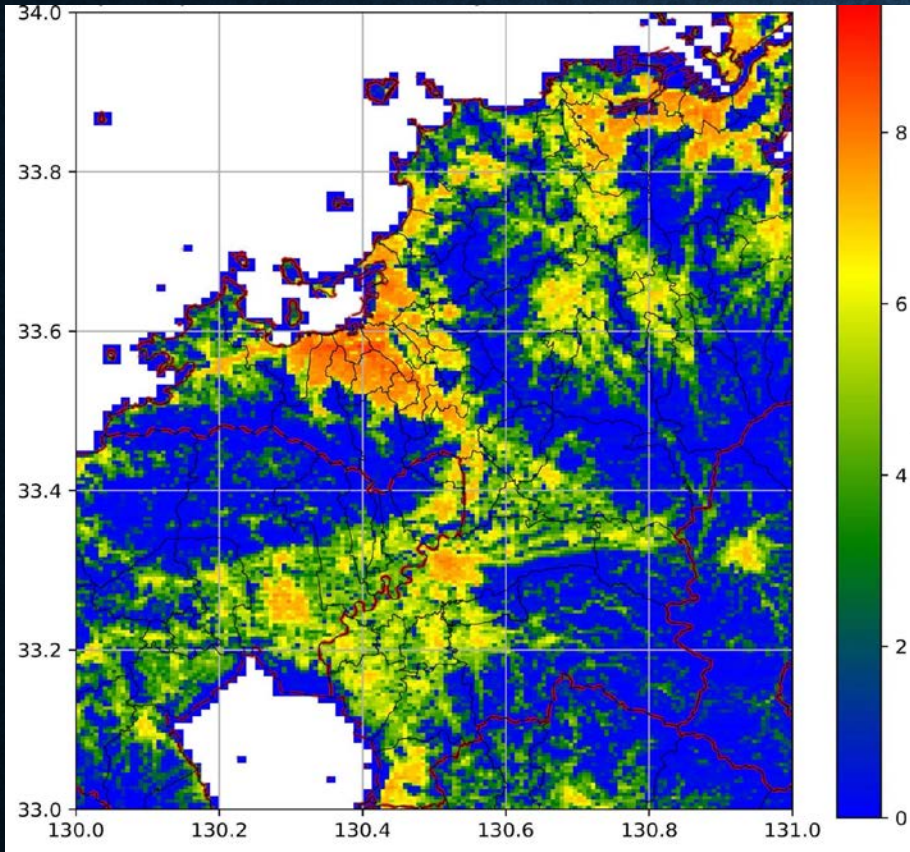
Not yet good



Data for people (need stat analysis)



Space to grid

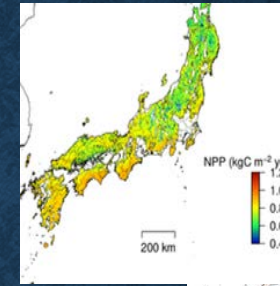


Predicted Population in 2030, 2050, and 2070

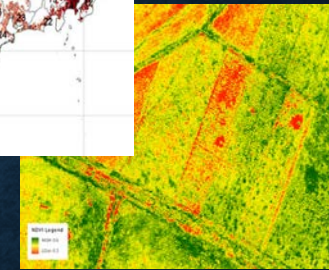
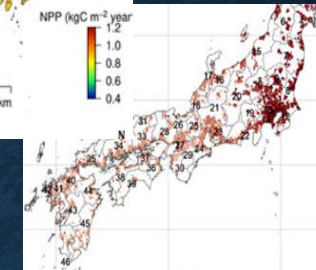
Land Cover Change



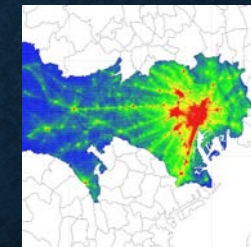
Greenness



Agriculture Productivity



Human Capitals



Human Activity

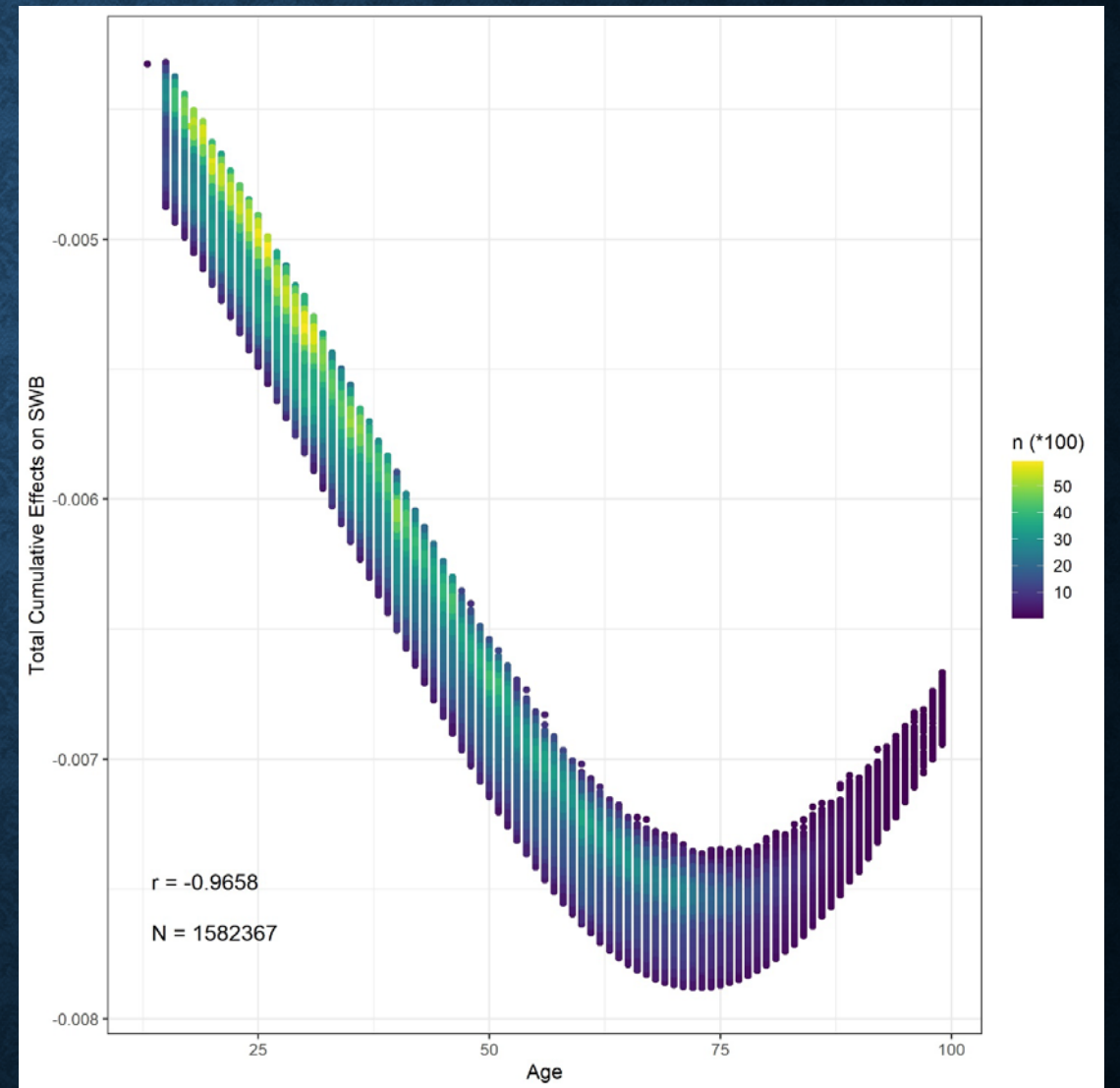
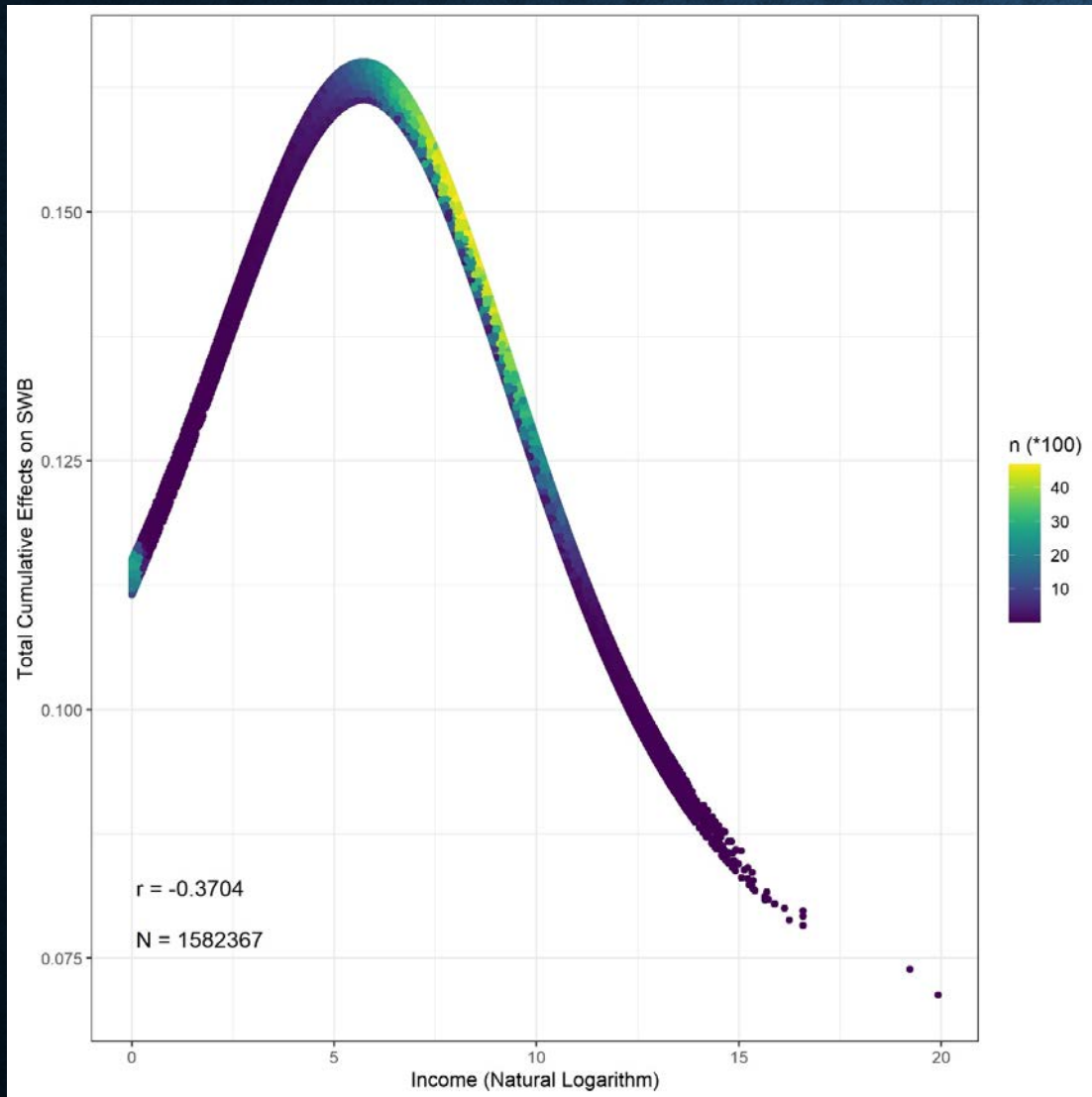


Infrastructure



Prosperity

Detecting the source of wellbeing in a region



Measurement advantage by satellite

Current Well-being

Key dimensions



Income and Wealth



Subjective Well-being



Safety



Work and Job Quality



Work-life Balance



Housing



Environment Quality



Social Connections



Health



Knowledge and Skills



Civil Engagement

Measurements



Averages



Differences between individuals and areas

Future Well-being

Key dimensions



Produced Capital



Natural Capital



Human Capital

Measurements



Stocks



Flows



Wealth Account Framework

G20 2023

T20 Policy Brief



Task Force 3:
LiFE, Resilience, and Values for
Wellbeing

INCLUSIVE WEALTH INDEX: A COMPREHENSIVE MEASURE OF LiFE TOWARDS 'NET ZERO'

May 2023

Shunsuke Managi, Distinguished Professor & Director of Urban
Institute, Kyushu University, Japan

Anindya Bhattacharya, PhD., Executive Director, The Celestial Earth, India

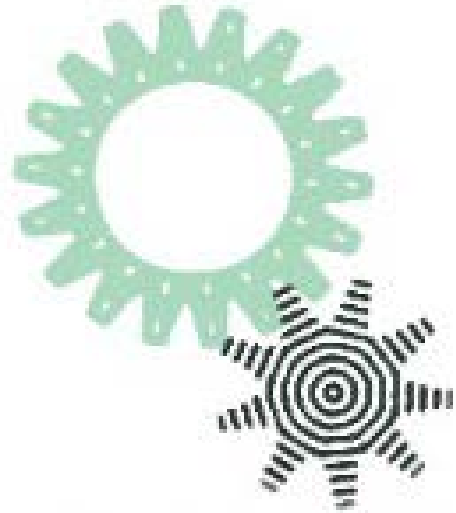
Tania Bhattacharya, Founder CEO, The Celestial Earth, India



Inclusive wealth as national target



Physical Capital



Manufactured capital

Roads, buildings, machines
and equipment



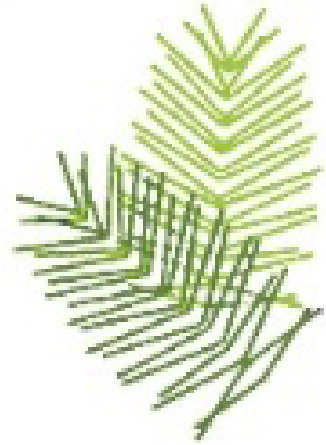
Human Capital



Human capital
Knowledge, aptitude,
education and skills

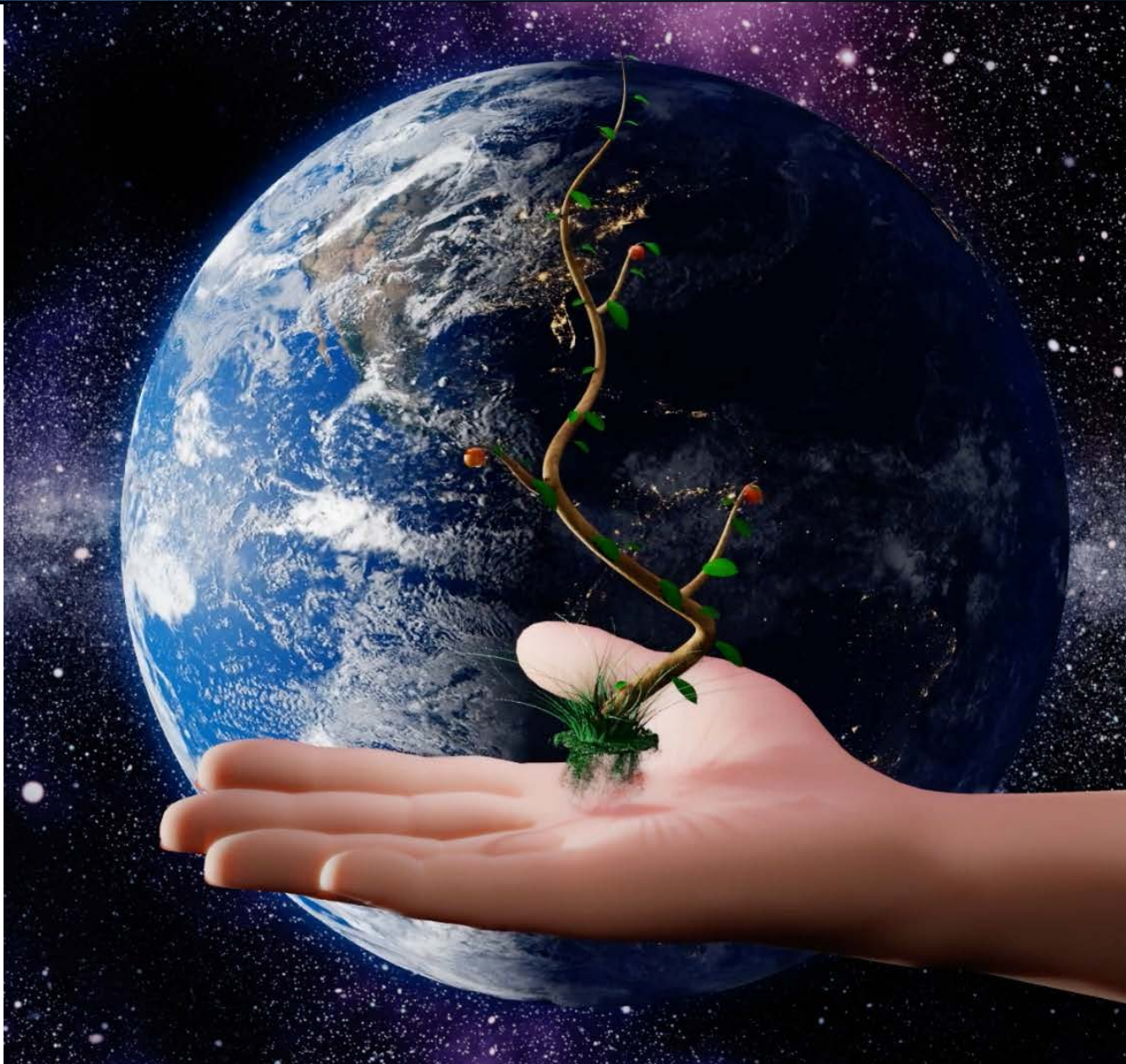


Natural Capital



Natural capital

Forests, agricultural land, rivers and estuaries, the atmosphere and the oceans – ecosystems more generally – as well as subsoil resources.



Natural Capital ⇔ Human Capital



THE TIMES OF INDIA

23 December 2020, Page One Plus

TIMES NATION

THE TIMES OF INDIA, NEW DELHI
WEDNESDAY, DECEMBER 23, 2020

'Pollution killed 1.7m in India in 2019, behind 18% of all deaths'

Study Pegs Its Economic Hit At ₹2.6L Cr, Nearly 1.4% Of GDP

Sushmi.Dey@timesgroup.com

New Delhi: Air pollution killed nearly 1.7 million people in India in 2019, accounting for an alarming 17.8% of all deaths in the country in the year, a new paper written as a collaborative effort by Indian institutions that include ICMR has said.

The economic loss due to lost output from premature deaths and disease caused by pollution last year was estimated at around Rs 2.6 lakh crore, nearly 1.4% of gross do-



Smog engulfs the Rashtrapati Bhavan in this November photo. Delhi suffered the highest per capita loss due to air pollution last year

Piyal Bhattacharjee

was 1.08% in Delhi. The highest loss to GDP was recorded by Uttar Pradesh at nearly 2.6% followed by Bihar at 1.9% and Madhya Pradesh and Rajasthan 1.7% each.

When it comes to impact of outdoor air pollution alone on state GDP, Delhi recorded a loss of 1.06%. UP still recorded the highest loss to GDP at just over 1.3% followed by Punjab at 1.2%.

Overall, deaths and diseases caused by air pollution are linked to loss of almost 1.4% of India's GDP, the study shows.

THE LANCET
Planetary Health

Volume 5 - Issue 1 - January 2021

www.thelancet.com/planetary-health



Articles

Air pollution and pregnancy loss in South Asia
See page e15

Articles

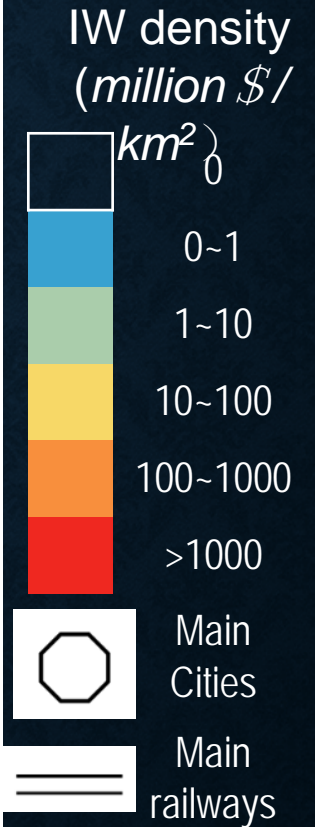
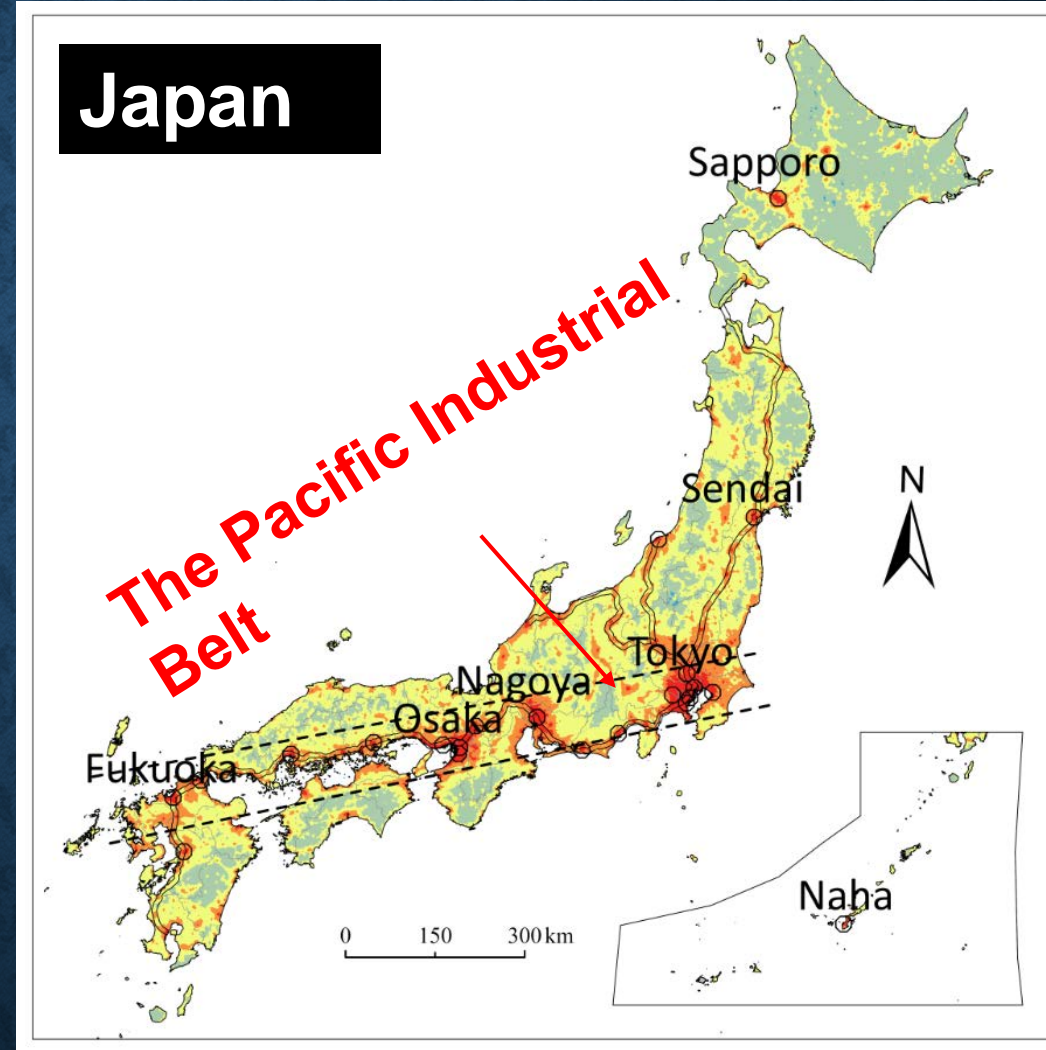
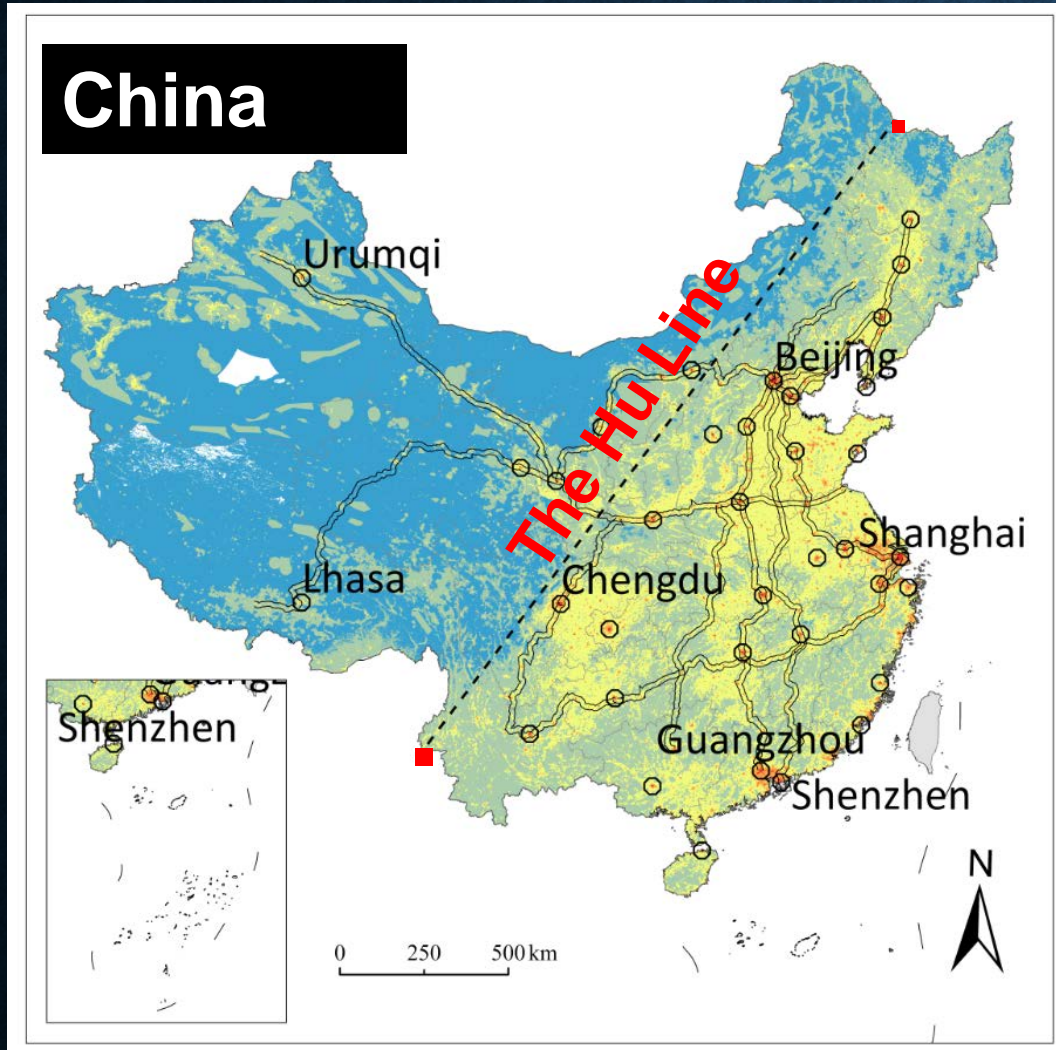
Air pollution in India: GBD 2019
See page e25

Personal View

Food systems innovation and the SDGs
See page e50

oa
OPEN ACCESS

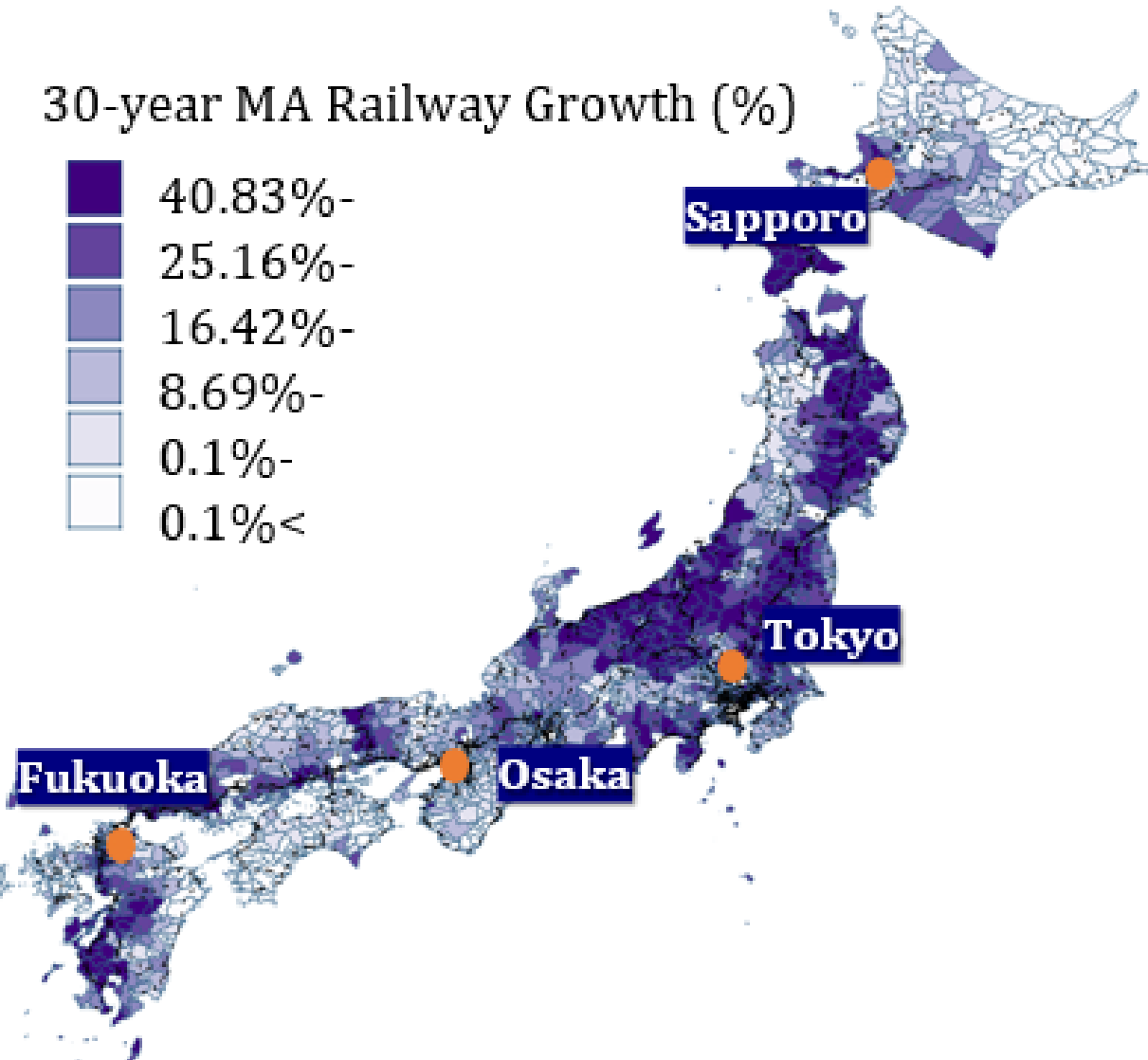
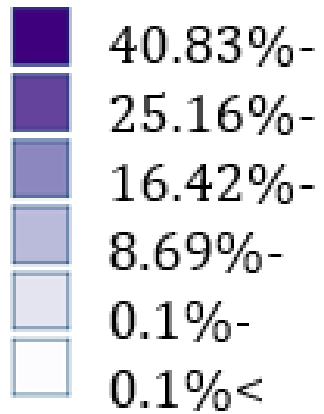
GRIDDED METHOD



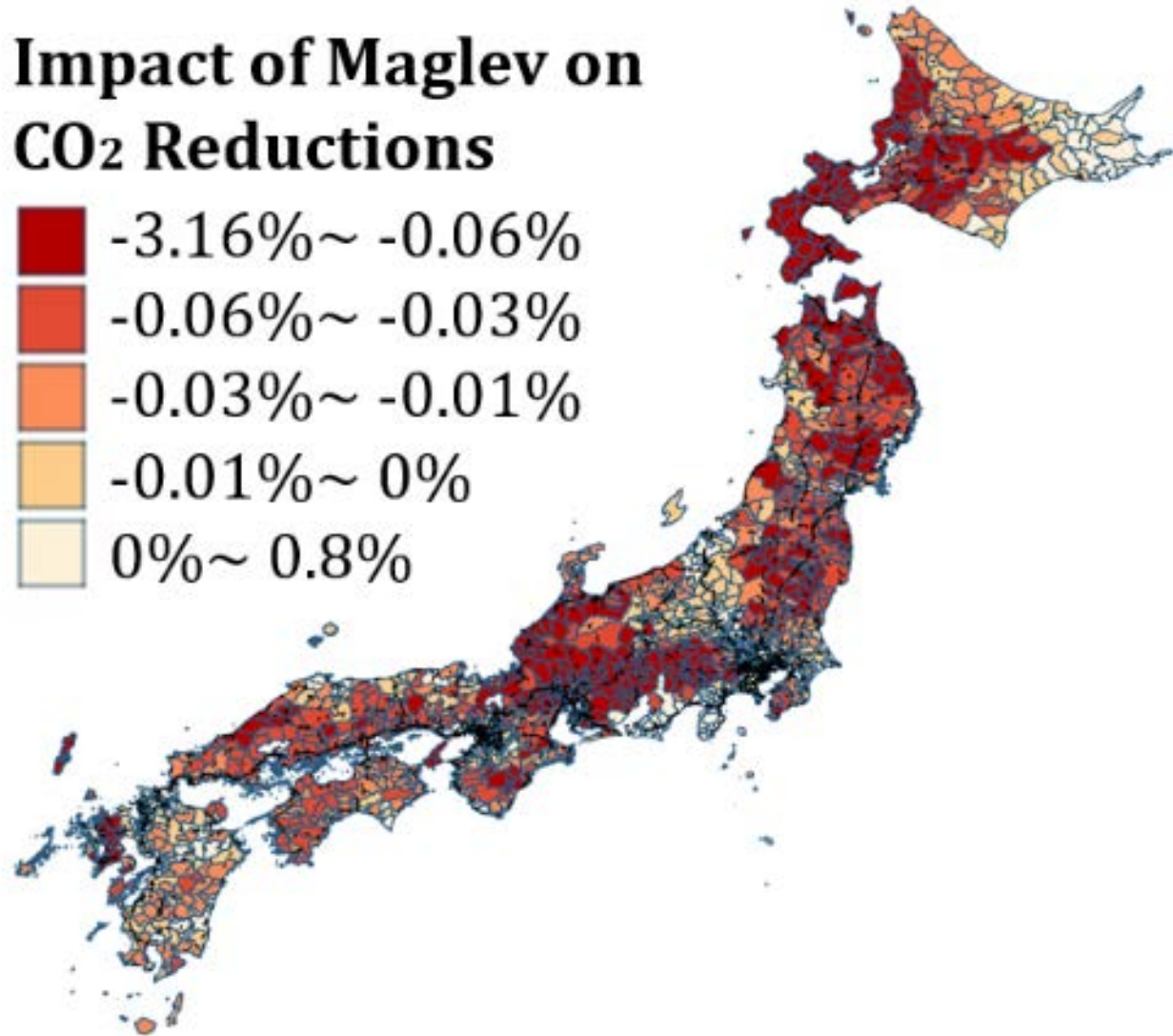
Spatial data used: land cover data, nighttime light data, gridded population data among others.

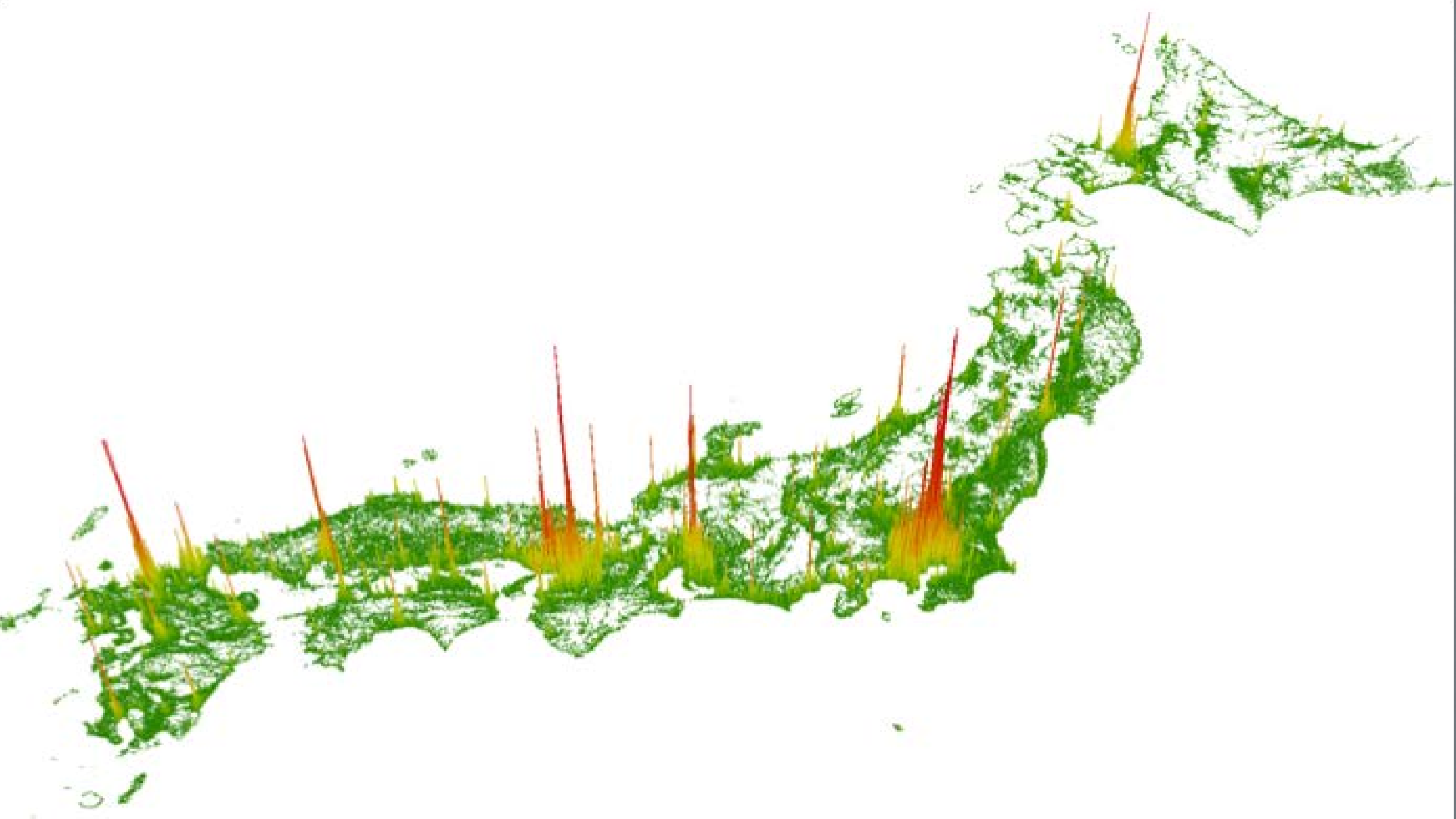
Value of infrastructure

30-year MA Railway Growth (%)



Impact of Maglev on CO₂ Reductions



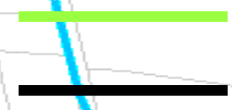




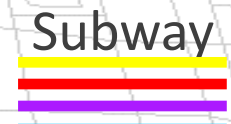
Wooden
Steel
RC



Bullet Train
Railway



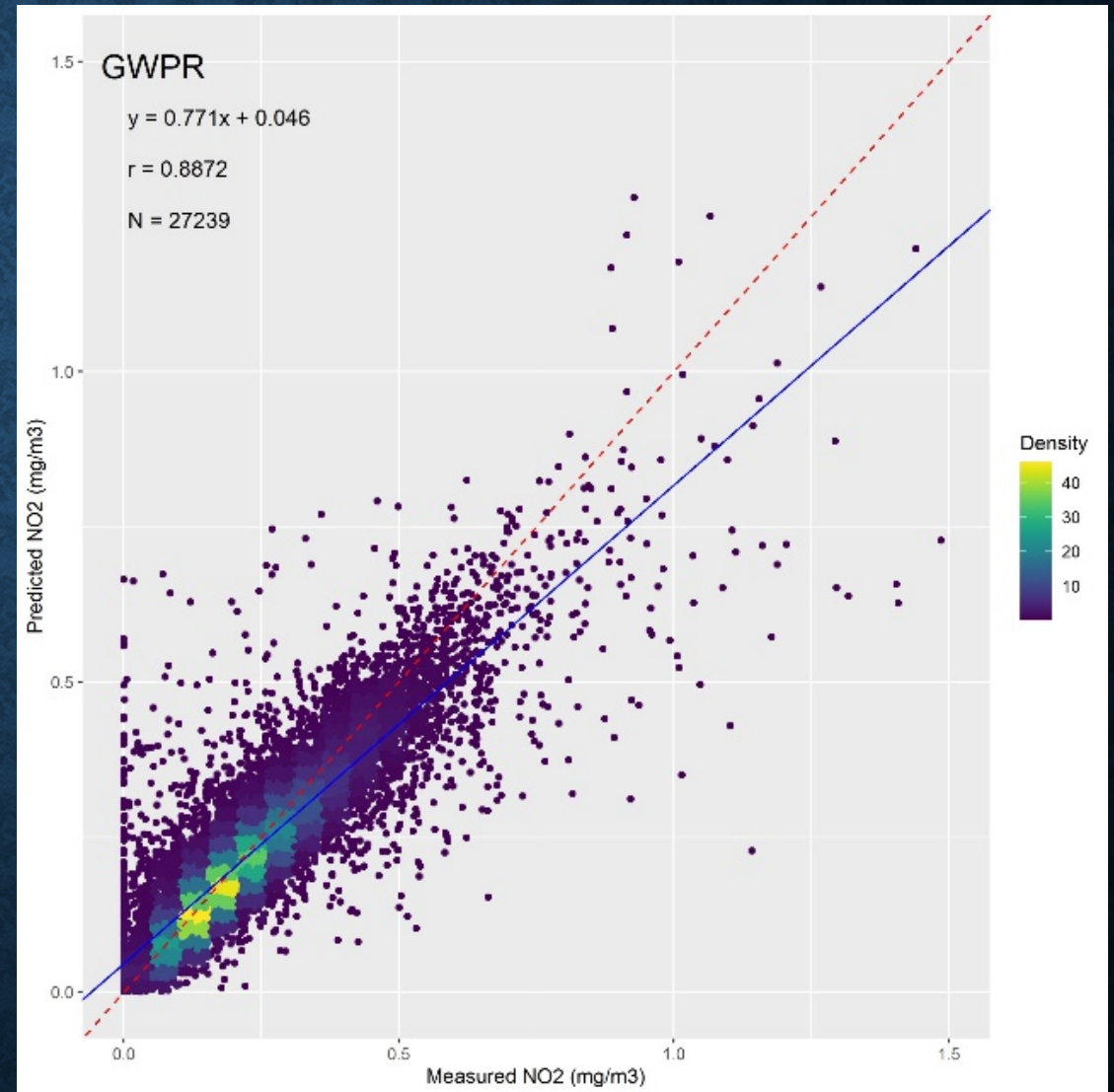
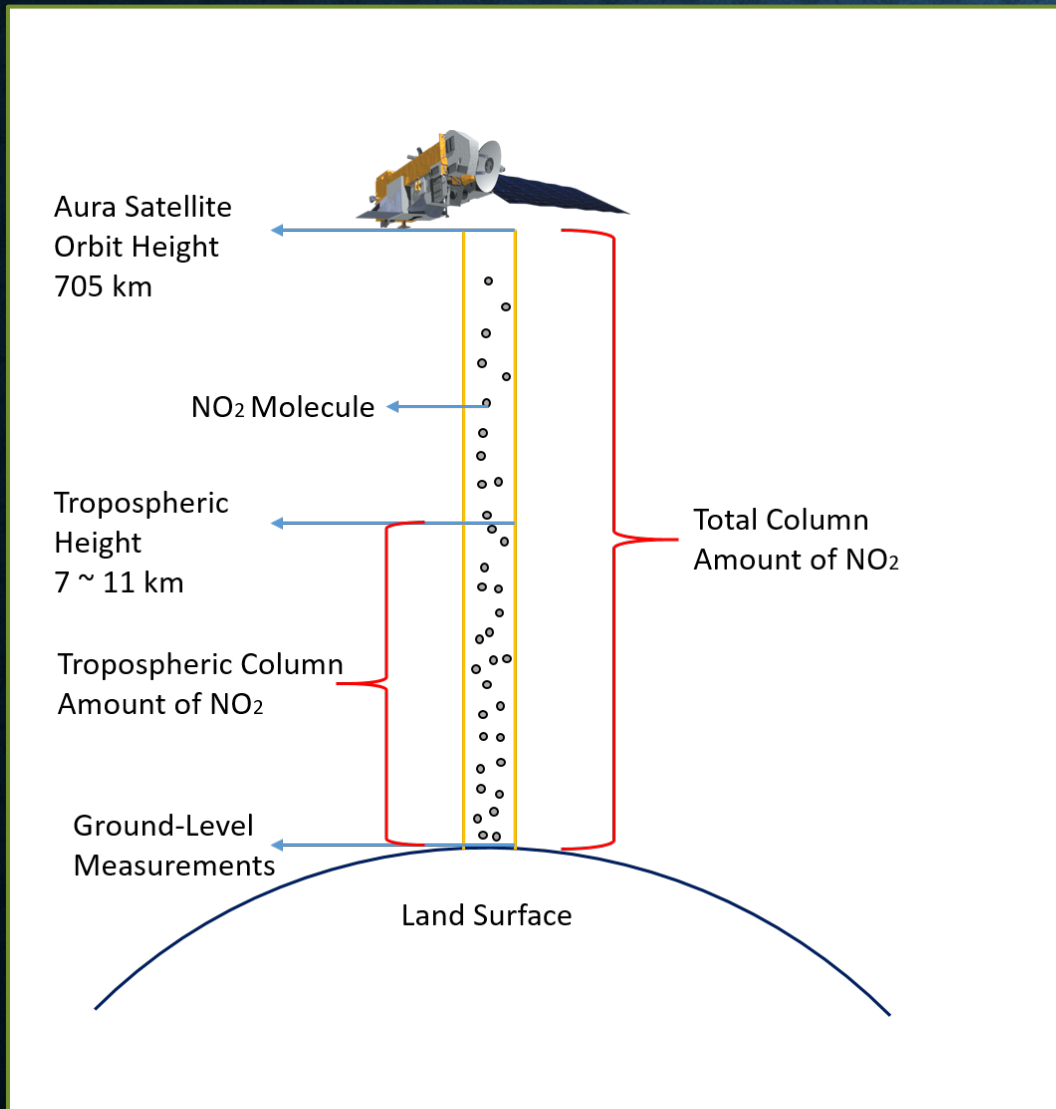
Tram
Other Railway



Subway

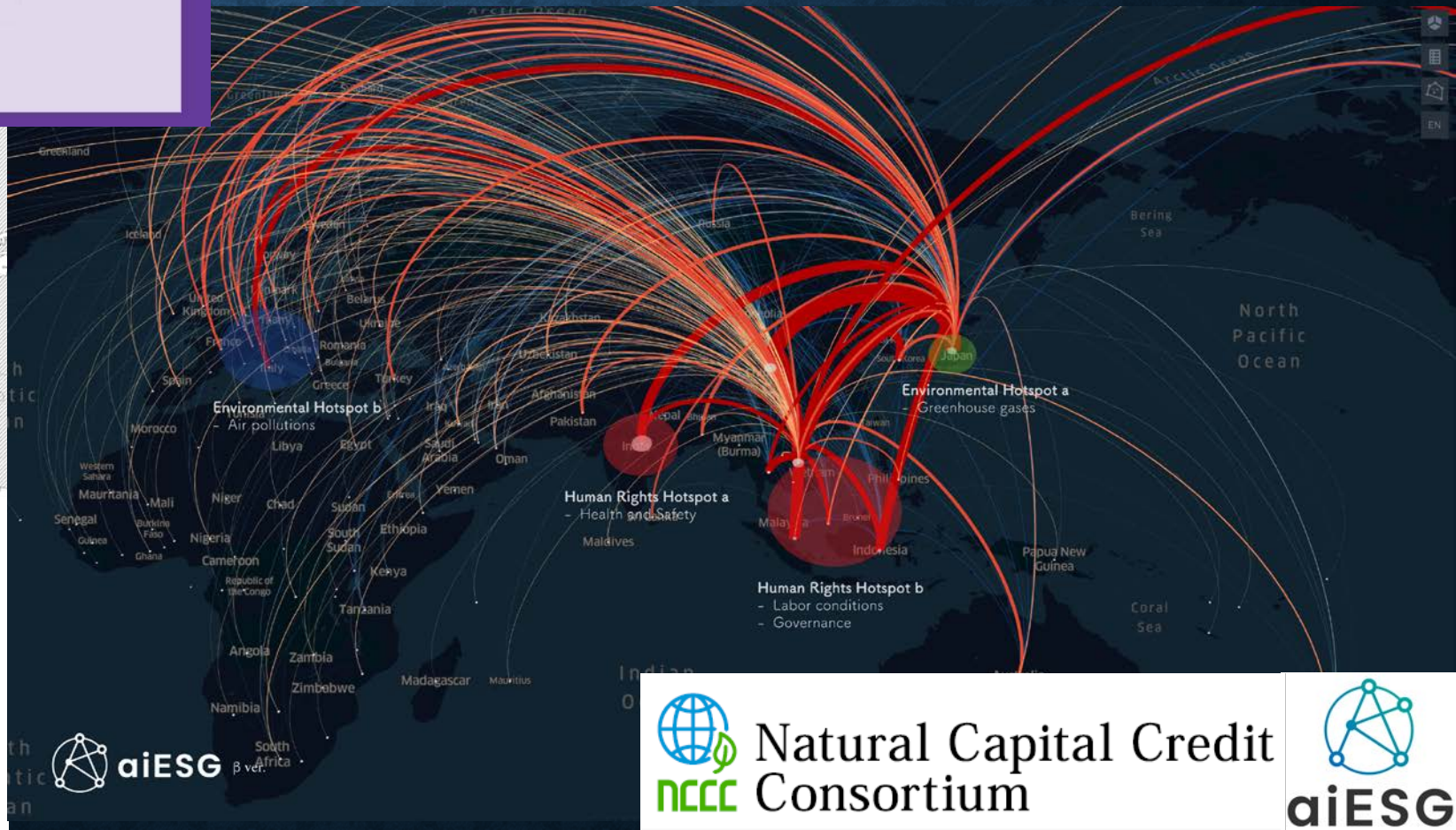
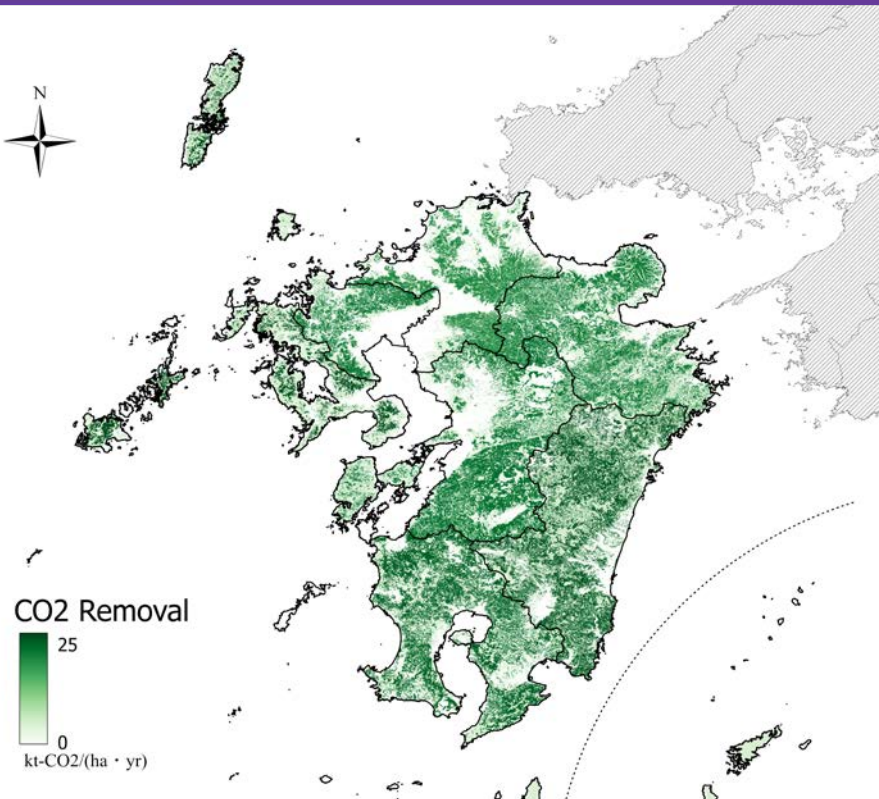
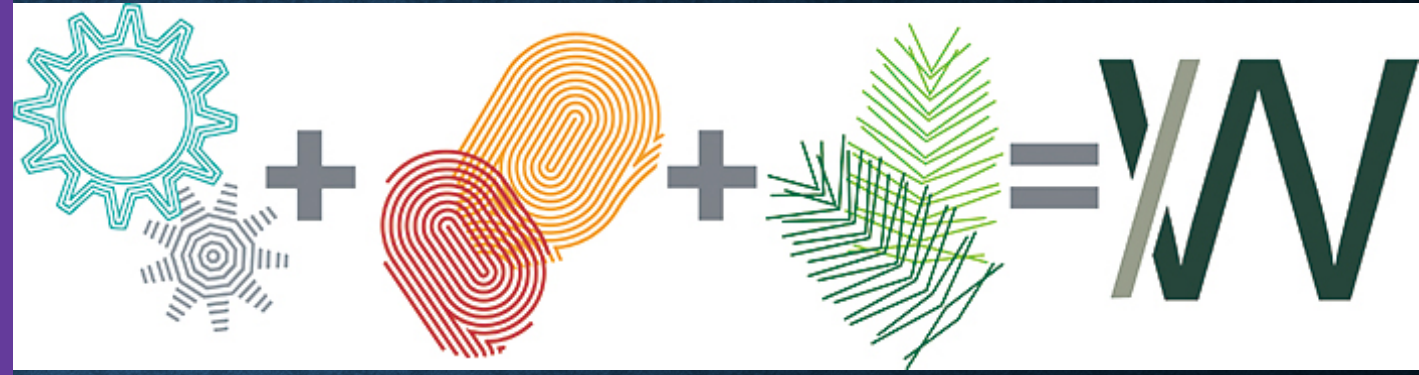
Data from Tanikawa lab.

Even monitoring station not there ...





A FRAMEWORK TO ENHANCE FINANCING CAPACITY AND INCENTIVISE PRESERVATION OF NATURAL ASSETS



Discussion: Adding value from space

- Benefit brings all
 - Bring firms & stakeholders into local projects
- Multi-dimension:
 - Need to understand multiple targets matter in same time

